

## CHAPTER XI

### ADMISSION TO THE FRESHMAN YEAR OF STUDENTS WHO ARE NOT HIGH-SCHOOL GRADUATES

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Acceleration in both high school and college is the order of the day. The shortening of semesters; the extension of the academic calendar to provide year-round education; the increase of the academic load that students carry; the granting of credit for work left incomplete when young men in high school or college are called into military service; the admission of students to college before they have graduated from high school; the condensation of the subject matter taught in specific courses; the increased tempo at which students are expected to master subject matter, particularly in the various Army and Navy courses; the provision of comprehensive examinations by which students may demonstrate their competence without fulfilling formal course requirements; the granting of college credit on the basis of performance in the examinations given by the Armed Forces Institute—these are some of the means employed to accelerate the education of youth so that they may get as much general education as possible before entering the armed forces or so that they may acquire as quickly as possible the competences required for special types of military service. These changes and many others have been introduced into the high schools and colleges to meet war-time demands. The secondary schools and colleges would be very shortsighted, however, if they assumed that the changes have been made merely to meet the exigencies of the times and that after the emergency they will return to the pre-war pattern of education. Now is the time to ask ourselves: What are the implications of wartime education for education in the post-war period? What are some of the changes precipitated by the war that were long overdue? Or, more specifically, what are the advantages and the



disadvantages of acceleration?

It is obvious that the admission of students to college before they have graduated from high school is only one small facet of the comprehensive problem to which educators with vision must give their attention. This specific issue has been the subject of so much controversy, however, that it merits special consideration. One who follows the discussion of the question: "Shall students be admitted to college before they are graduated from high school?" is inevitably impressed with the self-interest that each of the parties to the discussion—the high schools and the colleges—imputes to the other.

High-school administrators say that the colleges are motivated primarily by a desire to keep up their enrolments and to balance their budgets. They point out that the colleges have given little consideration to the reorganization of their curriculums or to the adaptation of methods of instruction to provide for the educational needs of these less mature students and, furthermore, that the colleges have taken no steps to set up personnel services appropriate to the needs of these students. The wholesale methods of recruiting high-school Juniors and first-semester Seniors, which were launched by some colleges when plans for the admission of these students were first announced, lend credence to the contentions of the high-school administrators.

The college officers, on the other hand, insist that the high schools are unaware of their own shortcomings; that competent students waste much of their time by taking the work of the Senior year in high school when they would be able to carry Freshman courses in college. They believe also that high-school principals are unduly concerned about the loss of students and the resulting effects on their own budgets and teaching staffs.

The issues can never be settled on the grounds of such contentions. Much more promising is the objective approach that takes into account the evidence of practical experience, the sociological and psychological considerations, and the possibilities of the adoption of other plans whereby the advantages of early admission to college may be achieved.

First, then, let us examine some of the evidence derived from practical experience bearing on the subject under discussion. This evidence relates to trends in the average age of Freshmen entering college, the academic records and social adjustments of



younger students entering college, and policies adopted by colleges and universities affecting the admission of students before graduation from high school.

In his comprehensive study of the junior college, Koos<sup>1</sup> presents considerable evidence indicating that there has been, since the first quarter of the nineteenth century, a gradual rise in the median age of students who enter college as Freshmen. With reference to Harvard, which he takes as somewhat typical, he found for the period from 1798 to 1802 the median age of Freshmen to be sixteen years and eight months; the age at the first quartile, fifteen years and two months. He goes on to show that during succeeding decades there was a gradual rise in the median age of Freshmen until in 1879-80 it was eighteen years and seven months. There have been only small variations from this median age since 1880.

Particularly pertinent to our problem are the facts with reference to the percentages of Freshmen who entered certain institutions at designated age levels. For example, in 1800-1804, 16.3 per cent of the Freshmen entering Dartmouth were fifteen and a half or under, and 26.8 per cent were sixteen and a half or under. At Bowdoin, in 1810-17, 30.5 per cent of the entering Freshmen were fifteen and a half or under, and 45.7 per cent were sixteen and a half or under. At Amherst, for the period 1827-31, 18.4 per cent of the Freshmen were fifteen or under, and 31.4 per cent were sixteen or under. At Harvard in 1829-32, 36.1 per cent of the Freshmen were fifteen and a half or under and 66.8 per cent were sixteen and a half or under. By way of comparison Koos points out that in 1916 only 0.7 per cent of the Freshmen entering Harvard were under fifteen and a half years of age and only 6.8 per cent were sixteen and a half or under. Corresponding data for the University of Minnesota in 1921 show that 0.3 per cent of the Freshmen were under fifteen and a half and 4.4 per cent were sixteen and a half or under.

Somewhat comparable data have been provided by John H. McNeely, who analyzed the ages of students who entered twenty-two institutions of higher education in 1931-32.<sup>2</sup> He found that 8.3

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<sup>1</sup>Leonard Vincent Koos, The Junior College, Research Publications of the University of Minnesota, Education Series, No. 5 (Minneapolis: University of Minnesota, 1924), pp. 244, 248.

<sup>2</sup>John H. McNeely, "College Entrance Ages," School Life, XXIII (October, 1937), 44.



per cent of the Freshmen entering these twenty-two institutions were under seventeen years of age. A larger percentage of the Freshmen in these twenty-two institutions fell in the age category of seventeen to seventeen and a half years than were in the category of nineteen to nineteen and a half years. At the University of Chicago, which was one of the twenty-two institutions included in McNeely's study, 11.8 per cent of the Freshmen were under seventeen years of age at the time they entered.

Two inferences may be drawn from these somewhat fragmentary data. First, over a period of fifty years after the first quarter of the nineteenth century, the age at which Freshmen enter college gradually rose. It need hardly be added that, concomitantly with this rise in age of college entrance, there was an increase in the amount of secondary-school preparation required for college entrance. Second, a small but nevertheless significant percentage of Freshmen still enter college at sixteen and a half or seventeen years of age. As a rule these are students whose progress through the elementary and the high schools has been accelerated because of their superior intellectual ability.

The writer has gathered, from correspondence with many institutions in the North Central Association concerning their policy regarding the admission of high-school students before they have graduated, that a considerable number of institutions have accepted students who had not fulfilled the formal requirements for a high-school diploma. The students admitted on this basis have more often been mature individuals whose demonstrated competence was accepted in lieu of formal high-school education, but there have also been in this group some superior students who were regarded as ready for college work before completing a full high-school course. Unfortunately, no exact statistical data have been secured, either as to the number of institutions that have admitted students on this basis or as to the number of younger students who were thus admitted. The main significance of this observation is that the policy of admitting students prior to graduation from high school antedates the war situation.

The question quite naturally follows: How well have the younger students admitted to college succeeded in making satisfactory academic progress and social adjustments? Here again the evidence is somewhat limited. There is, nevertheless, sufficient agreement in the conclusions derived from several isolated studies



to justify attaching considerable weight to the conclusions. One might be less certain as to the validity of the conclusions were they in sharp conflict. A brief résumé of several of the reports that have been made will indicate the nature of these studies and will throw some light on the question relating to the progress and adjustment of the younger students.

An experiment in the Kansas City Junior College extending over a period of seven years was reported by Koos at the last annual meeting of the North Central Association.<sup>3</sup> During the period of this experiment 1,226 students were admitted to a three-year junior-college program after they had completed six years in elementary school, two years in junior high school, and one year in senior high school. The median age of the group when it entered the second year of the three-year junior-college program, which would correspond to the Freshman year of college, was approximately sixteen and one-half years. The median age of those who graduated from the junior college, about half of those who entered, was approximately eighteen and one-fourth years.

Such evidence as could be secured indicated that the experimental group which chose voluntarily to undertake the three-year junior-college program was superior in ability to the general run of high-school pupils. On the Otis Group Intelligence Test the experimental group stood at about the third quartile for high-school pupils. A corresponding superiority was shown in measures of the reading ability of the experimental group.

In appraising the success of these younger students, two indices were employed: (1) academic achievement measured by the Co-operative Tests in English, literary acquaintance, contemporary affairs, general culture, and general mathematics; (2) a follow-up study relating to success in the senior college. From the results of these tests Koos draws the following conclusion:

One carries away from these several comparisons the conclusion that, within the limits of the validity of the tests used, some of the results were distinctly favorable, and most of them were not unfavorable, to the college-preparatory group, notwithstanding the fact that on the average this group was something like one and one-fourth to two years younger than students represented in the national norms.

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<sup>3</sup>L. V. Koos, "Final Report on the Kansas City Junior College Experiment" (Paper given at the annual meeting of the North Central Association of Colleges and Secondary Schools, March, 1943).



On the basis of the follow-up study that was made of the experimental groups, the following conclusion is presented:

On the whole it seems within the truth to say that the record of the graduates of the experimental unit, as indicated by the proportions continuing in senior colleges, the proportions receiving degrees, and the senior-college marks received, is a creditable one.

The report as a whole is much more complete than the brief summary presented here would indicate. Nowhere in the report, however, is there any indication that the students who entered the experimental program in the Kansas City Junior College were at a disadvantage, either with reference to their educational achievement or with reference to their post-college experience. Quite to the contrary, the results of the experiment were, in general, very favorable.

Noel Keys reports on a group of students under sixteen and one-half years of age who were admitted to the University of California up to 1936.<sup>4</sup> His study indicates that students entering college under sixteen and a half years show a large and significant superiority over unselected groups of students on practically all points of scholastic distinction. The grade-point ratio made by this group was one-fourth of a point above the average of their respective classes. The under-age group earned more than three times the number of scholarships received by the control group, and twice as many in the under-age group as in the control group graduated with honors. Four times as large a proportion of the younger students as of the control group were elected to Phi Beta Kappa. Thirty-eight per cent of the under-age group became members of honor societies of all kinds, as compared with 16 per cent of the control group.

In 1934 the University of Louisville admitted thirteen students from the Louisville High School who had completed only three years of the regular four-year high-school program.<sup>5</sup> These students were carefully selected with reference to their ability on the recommendations of high-school principals and teachers,

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<sup>4</sup>Noel Keys, The Underage Student in High School and College, University of California Publications in Education, Vol. VII, No. 3 (Berkeley, California: University of California Press, 1938), pp. 259-66.

<sup>5</sup>Lily Detchen, "College Education without High-School Graduation," School Review, XLVII (March, 1939), 182-91.



supplemented by standardized aptitude and achievement tests. When admitted to the University, they were accorded the same treatment given their classmates. As a means of measuring as accurately as possible the achievement of the specially selected group, each was matched individually with another student of comparable ability who was at least one year older. In scholastic achievement, as measured by the National Sophomore Tests, both the experimental and the control groups stood above the national norms in median achievement, with the exception of two students in each group. The significant fact is, of course, that the experimental group who had completed only three years of high school did as well scholastically as those who were one year older and who had completed the usual four-year high-school course.

It is true that these experiments are fragmentary and, except in the case of the University of Louisville experiment, relate primarily to the success in college of under-age students. However favorable the conclusions may be, they cannot be regarded as settling the issue with reference to the admission of students to college before they have completed high school. On the other hand, the conclusions are in such close agreement that there is reason to believe that other experiments equally well controlled will not show significantly different results with reference to the scholastic records of students who are admitted to college a year or two earlier than the usual age of college Freshmen.

But it will be said: "Perhaps the young student gets along satisfactorily in his academic work, but does he make an equally good showing in his personal and social adjustments to college life and conditions?" On this point also the evidence, so far as there is any, is entirely in the affirmative. With reference to students under sixteen and a half years entering the University of California, Keys reports that in college activities of various types, with few exceptions, the younger entrants either held their own or markedly excelled, both in percentage participating and in distinctions won. In the University of Louisville experiment the students who had entered the University at the end of three years of high school took less part in extra-curriculum activities during their first semester than did the members of the control group. After the first semester, however, the students in the experimental group made a satisfactory



adjustment to the program of extra-curriculum activities.

With a view to appraising the maturity of a group of Freshmen who were admitted to Purdue University before they had graduated from high school, Remmers secured for each student four ratings from the student's former high-school teachers on the Purdue Maturity Rating Scale with reference to fourteen specific characteristics. The ratings of these Freshmen were compared with similar ratings given to a random sampling of high-school Juniors and Seniors in a representative Indiana high school. The data secured by Remmers show that the high-school Juniors who were admitted to Purdue University were superior to the random sampling of high-school Juniors and Seniors in a typical Indiana high school. Remmers concludes: "It is clear, then, that in the judgment of teachers the high-school Juniors admitted to Purdue University are as a group more mature socially and emotionally than are typical high-school Juniors and Seniors."<sup>6</sup>

It appears from all the data available that, on the whole, the problems of social adjustment on the part of the younger students who are admitted to college are no greater than they are among those who enter college at the usual age and with the usual four years of high school as a background. Keys points out, very significantly, that most of the difficulties of social adjustment are caused by the type of mind that goes to college young and not by the difference in age. The younger students in the University of California were inclined to feel that the occasional misfit in their group attracted more attention than the many who were wholesomely adjusted in the same group. Keys adds that the misfits were a comparatively small minority in the under-age group.

The critical reader of these reports will immediately call attention to the fact that the young students who were the subjects of these experimental studies were very carefully selected in terms of their ability and were, therefore, not representative of the usual student who might be admitted to college at the end of his Junior year or at midsemester of his Senior year in high school. This is true, but, so far as I have been able to observe, no one has proposed the indiscriminate admission of students prior to their graduation from high school. The proposal made by the Educational Policies Commission, for example, reads in part as

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G. H. Remmers, mimeographed report.



follows:

We urge that, during the war emergency, selected students who achieve Senior standing in high school and who will, in the judgment of high-school and college authorities, profit from a year's college education before they reach selective-service age, be admitted to college and, at the end of the successful completion of their Freshman year, be granted a diploma by the high school and full credit for a year's work towards the fulfillment of the requirements for the Bachelor's degree or as preparation for advanced professional education.<sup>7</sup>

With a view to clarifying the situation following the widespread unfavorable reaction to the statement of the Educational Policies Commission, the Executive Committee of the North Central Association issued to the colleges and high schools in the Association a statement of policy from which I quote one paragraph:

Unrestricted admission to college of students who have not completed the secondary-school program cannot be justified on educational grounds. Most secondary-school pupils not immediately subject to the provisions of the Selective Service Act should complete, if possible, the full program of studies offered by the school and thereby qualify for graduation. It is recognized, however, that individual students in some instances may be competent to undertake work at the college level without having fulfilled the usual quantitative requirements for admission to college. This fact has long been recognized but present conditions bring it into sharper focus. Selection of such students should be made on an individual basis through the close cooperation of the appropriate guidance officers of the secondary school and the college concerned and should be confined to those advanced students who can demonstrate that they possess the educational achievement, the intellectual ability, and the social maturity essential to such admission.<sup>8</sup>

Immediately following the announcement of the proposal made by the Educational Policies Commission, the University of Missouri asked the state superintendent of schools to call a conference of representatives from institutions of higher learning and from the public schools to consider the question of the admission of students to college prior to their graduation from high school. The report of that conference points out that this problem consists of two phases: (1) the long-term issue involving problems of acceleration, of transition, orientation, and guidance, and of sweeping and thoroughgoing curriculum adjustments; (2) an

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<sup>7</sup> Educational Policies Commission, "Statement of November 23, 1942" [*italics not in the original*].

<sup>8</sup> North Central Association of Colleges and Secondary Schools, Executive Committee, "Statement of Policy," January 9, 1943.



immediate situation that requires emergency measures to meet the demands of the current year. With reference to the first of these issues, the conference proposed that a commission be set up immediately to develop a long-term plan. With reference to the more immediate issues, the following principles were agreed upon:

A. No students shall be recommended for college entrance unless it is established that their experience in the Freshman year of college will be more greatly to their advantage or that of the nation than would a similar period in the secondary school.

C. They should rank in the upper third of Missouri high-school pupils on the best available tests of college aptitude.

D. Generally speaking, they should be students who rank in the upper third of their high-school groups in high-school marks.

E. They should furnish evidence of satisfactory physical condition and possess appropriate social maturity.

F. Their admission to the program must have the official approval of their respective high-school principals.<sup>9</sup>

The point of view reflected in the policies adopted by individual institutions does not differ markedly from that embodied in the statements that I have just quoted. For example, Purdue University published and circulated a statement that reads in part as follows:

A person with a superior scholastic record in high school will be considered for admission to Purdue University if he has earned credit in not fewer than twelve units toward graduation, provided,

1. he is recommended by his high-school principal,
2. he qualifies by his performance on prescribed admission tests, including an eighth-grade arithmetic test,
3. for admission to engineering, he has credit for one unit of algebra and one unit of plane geometry,
4. he is approved for admission by the University Committee on Selection,
5. his program of study for the first academic year is approved by the University Committee on Selection.<sup>10</sup>

One of the most far-reaching changes in definition of admission requirements was recently adopted by the Faculty of the College in the University of Chicago. It reads:

Admission to the College is based upon evidence that the student is prepared to undertake the work of the College successfully. Such evidence may be found in the quality of his academic

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<sup>9</sup>University of Missouri, "Report of a Subcommittee as Approved by a Conference Meeting with the State Superintendent of Schools in Jefferson City on December 18, 1942" (Columbia, Missouri: University of Missouri).

<sup>10</sup>Purdue University, "The Purdue University Plan for Admission of the Superior Student without High-School Graduation" (Lafayette, Indiana: Purdue University).



achievement as reported by his high school, the judgments concerning him which appear in recommendations of his high-school principal, teachers, or other persons who know him, and the scores he has made on standard scholastic-aptitude tests.

There are no specific credit requirements for admission to the College. A student who has completed eight units (two years of high-school work) will normally enter the first year of the College and complete the requirements for a Bachelor's degree within four academic years. A student who has completed eleven or twelve units (three years of high-school work) will normally enter the second year of the College and complete the requirements for a Bachelor's degree within three academic years. A student who has completed fourteen to sixteen units (four years of high-school work) will normally enter the third year of the College and complete the requirements for a Bachelor's degree in two academic years. Each student will be given placement tests, and the results of these tests, rather than the amount of high-school credit, will be used to determine at what point he should enter the College program.<sup>11</sup>

Certainly there is nothing in these statements that would imply an inclination on the part of colleges or of the organizations representing the colleges and universities to open the way for the admission of students prior to their graduation from high school unless, in the judgment of high-school officers and college officers alike, the students are qualified both with reference to their scholastic ability and with reference to their social maturity to undertake work at the college level. It is a fact that a few colleges very unwisely undertook to recruit indiscriminately high-school Juniors and first-semester Seniors when the proposals to admit students to college before they had completed high school were first announced. Undoubtedly this ill-considered course on the part of a few colleges created alarm among the high-school principals and was the source of no little embarrassment to the colleges and universities that were committed to the point of view indicated by the statements of policy which I have just quoted.

There are cogent arguments to support the adoption of some form of acceleration as a permanent readjustment of elementary, secondary, and collegiate education. I have already indicated that generally throughout the United States we have prolonged the period of pre-college education. Equally important is the fact that we have extended the period of professional education so that it is impossible for an individual to enter a remuner-

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<sup>11</sup>University of Chicago, "Minutes of the Meeting of the Faculty of the College Held June 9, 1943."



active profession until he is twenty-five or even thirty years of age. The significance of this prolongation of education is stated so well by Professor Ogburn that I venture to repeat, in part, a statement which was quoted from him by Dr. Works in this Institute in 1937:

To enter remuneratively in one's profession at twenty-five or thirty years of age is late. Some of the learning that comes from experience outside schools might be had with profit before this time, when habits of adaptation are easier. It is very good to be working at one's profession during this period as well as to be preparing for it.

To be graduated and to enter upon a career is not, of course, to become at once self-supporting, at least in the level to which the students have been accustomed. The young lawyer is said to undergo a starvation period lasting varying lengths of time and the doctor an internship before his meager beginnings.

The transition from school to occupation is probably easier at earlier ages than those of graduation today. The businessman expects the college graduate to begin at the bottom with a pick and shovel. It is easier for a youngster to take hold of the lower rungs of the ladder than for a man of twenty-five or thirty years. . . .

Ordinarily a young man does not marry until he can support a wife and look forward to advancement in his chosen occupation. Biologically the age at which the organism is ready for marriage is in the early teens. But the social age for marriage is much later than the biological age. Indeed one must be quite well along in years to meet competently the problems of a family life. This discrepancy of some fifteen years between the biological age for marriage and the social age is the source of many grave problems for society and for the individual. For instance, the death rate of single men is twice that of married men at all ages. That this is not due to selection is shown by the similar difference for the widowed and divorced men. The crime rate is a little more than twice as large for unmarried as for the married when the ages are the same. Among the admissions to the insane hospitals there are more unmarried than married for both sexes when the ages are the same. For instance, among the male admissions to the hospitals for the insane about 50 per cent are unmarried, while in the general population of the same ages only about 25 per cent are unmarried. Similar proportions exist for females. Of course, not all unmarried persons are social problems. Indeed about one in ten persons in modern civilization (in marked contrast to the primitive cultures) does not marry at all. Generally bachelors and spinsters show eccentricities beyond the average though, of course, everyone knows quite normal men and women who have never married. Still educational policies should be made for the large numbers and not for these exceptional persons.

The average age at marriage of women college graduates is around twenty-six years and for men about two or three years later. For doctors and lawyers (a small random sample taken from *Who's Who*) the average age of marriage was 30.5 and 28.5 years. These marriages were consummated thirty years ago more or less. A generation ago, of the men college graduates, ten years after leaving college, 25 per cent generally have not married and nearly 50 per cent of the women graduates are not married. Perhaps not



so large a per cent of women graduates today will remain unmarried.

An educational program which leads to a postponement of marriage to around thirty years of age for men and several years later than the average of marriage should at least be challenged. Only a small per cent of college students are married, though they make better students. The age of marriage of women has been shown in several studies to be later for college graduates than for those who did not go to college, when they came from the same economic and social class. Women marry about two or three years earlier than men. Yet in our society the age of marriage for men is a determining factor in the age of marriage of women. The time in life for setting up a family is a most important consideration. It affects for instance the number of children to come. College graduates are supposed to be a specially favored group by heredity. Whether this be so or not and whether there is an eugenic significance in the early marriage of college graduates, they are probably better fitted culturally to rear children. The childbearing period of women is only about thirty years, and a postponement of marriage for women through nearly half that period, and of men to fifteen years after they are biologically equipped for marriage, must have serious biological and social consequences.<sup>12</sup>

Another fact bearing on the whole question of acceleration in education is the age at which individuals reach the peak of their productivity. On this point Pressey quotes authorities and cites specific instances to support the following conclusion:

In short, over and over, the evidence is that individuals of prominence began their productive career while many individuals now headed for careers in the same fields are still in school. Full-time education seems to be extending into years that should go into productivity, not simply be allotted to getting ready. . . . It seems not unreasonable to suppose that every year a million of the thirty million people now in full-time education in this country might save a year. Surely that would be a major contribution to the national economy.<sup>13</sup>

Whether one is viewing the question of educational acceleration from the angle of the immediate emergency or from the point of view of a long-time educational policy, one cannot ignore the economic, sociological, and psychological considerations that are stressed in the foregoing statements.

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<sup>12</sup>George A. Works, "Arguments in Favor of Granting a Bachelor's Degree at the End of the Junior College Period," in Current Issues in Higher Education, Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. IX (Chicago: University of Chicago Press, 1937), pp. 8-10.

<sup>13</sup>S. L. Pressey, "Guidance and Acceleration," in Proceedings of the Eighth Annual Guidance Conference Held at Purdue University, November 13 and 14, 1942, Studies in Higher Education, XLVII (Lafayette, Indiana: Division of Educational Reference, Purdue University, 1942), p. 71.



The question still remains: Does the admission of students to college before they have graduated from high school point the way to a desirable readjustment in higher education in the post-war period? Before giving a categorical answer to this question, it is necessary to consider other alternatives. One cannot go very far, however, in examining alternatives to admission of students prior to their graduation without being forced to examine our whole scheme of education. If competent students who are admitted to college a year and a half or two years earlier than is the characteristic age of Freshmen do well scholastically and make satisfactory social adjustments (as all the evidence available up to the present time seems to indicate) and if, moreover, it is desirable economically, sociologically, and psychologically for students to enter upon a profession or a vocation at an earlier age than they are now able to, can we best achieve this end by merely lopping off one year of high-school work?

It has been pointed out repeatedly that the whole scheme of education in the United States—an eight-year common school upon which rests a four-year high-school program—resulted from the adoption of the plan of the German Volksschule in this country, which we gradually extended upward to include the high school. It has also been demonstrated repeatedly that there is considerable waste of time for pupils in our present scheme. Six years of elementary-school work would provide a satisfactory foundation upon which to build a program of three or four years of truly secondary instruction.

There is also unwarranted waste in the transition from the Senior year of high school to the Freshman year of college. It has been estimated that there is as much as a 20 per cent duplication between the Senior year of high school and the Freshman year of college in certain subject-matter areas. As a consequence, Freshmen in college often find it necessary to repeat much of the material that they have already covered and mastered satisfactorily in their high-school programs. There is every reason to believe that, by the elimination of the waste that is now characteristic of our scheme of education owing to a lack of a close articulation of the various levels of education, it would be possible easily to save two years of time, at least for the superior student—the type of student who is destined to enter college and to prepare for a professional career. Recognizing



that not all students in the upper years of high school and the first years of college are superior in competence, one can see a good reason for the proposal made by Koos in his report on the Kansas City experiment, namely, that a two-track junior-college program be organized—a four-year junior college combining the Junior and the Senior years of high school with the Freshman and the Sophomore years of college, and "a carefully integrated three-year junior college for superior students, with provision for convenient transfer from the four-year to the three-year track, and vice versa."

Further investigations are needed before we are able to make any conclusive appraisal of the net effects of educational acceleration. But it seems clear, from the studies that have thus far been made, that acceleration is desirable, particularly for the superior student. It seems equally clear that the admission of students to college before they have graduated from high school must be regarded as a temporary expedient. If some type of acceleration is considered desirable as a permanent policy, it should be achieved by a reorganization of instructional materials so as to bring about a closer articulation of the elementary and the high school, and of the high school and the college, in order to eliminate much of the waste that now characterizes our whole scheme of education.